

Applic. No.: 10/635,737

Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

Amendments to the Drawings:

The attached sheet of drawings includes new Fig. 3 showing the transmission of the light through the surface on which the substrate stock is to be recognized.

Attachments: New Sheet

Applic. No.: 10/635,737

Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 15-22 are now in the application. Claims 1-14 have been cancelled. Claims 15-22 have been added.

In item 1 on page 2 of the above-identified Office action, the drawings have been objected to under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims.

More specifically, the Examiner has stated that the transmission through the surface on which the substrate stock is to be recognized must be shown or the feature(s) cancelled from the claim(s).

New Fig. 3 has been added to show the transmission through the surface on which the substrate stock is to be recognized. The specification has been amended accordingly.

In item 3 on pages 3-4 of the above-identified Office action, claims 2-7, 9-12, and 14 have been rejected as being indefinite under 35 U.S.C. § 112, second paragraph.

Applic. No.: 10/635,737

Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

Claims 1-14 have been cancelled and new claims 15-22 have been added to overcome the deficiencies listed by the Examiner.

It is accordingly believed that the claims meet the requirements of 35 U.S.C. § 112, second paragraph. Should the Examiner find any further objectionable items, counsel would appreciate a telephone call during which the matter may be resolved. The above-noted changes to the claims are provided solely for cosmetic and/or clarificatory reasons. The changes are neither provided for overcoming the prior art nor do they narrow the scope of the claims for any reason related to the statutory requirements for a patent.

In item 5 on page 4 of the above-mentioned Office action, claims 1-5, 7-12, and 14 have been rejected as being anticipated by Hashimoto (US 5,764,251) under 35 U.S.C. § 102(b).

In item 6 on pages 4-5 of the above-mentioned Office action, claims 1-3, 8-11, and 14 have been rejected as being anticipated by Sainio et al. (US 5,689,425) under 35 U.S.C. § 102(b).

In item 7 on page 5 of the above-mentioned Office action, claims 1-5, 7-9, 12, and 14 have been rejected as being

Applic. No.: 10/635,737

Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

anticipated by a human or the human eye looking at a printer under 35 U.S.C. § 102(b).

In item 9 on pages 5-6 of the above-mentioned Office action, claims 6 and 13 have been rejected as being unpatentable over Hashimoto under 35 U.S.C. § 103(a).

The rejections have been noted and claims 1-14 have been cancelled and claims 15-22 have been added in an effort to even more clearly define the invention of the instant application. New claim 15 is based on original claim 1 and the disclosure on page 3, lines 17-19 and lines 23-29, page 4, line 29 to page 5, line 4, and page 5, lines 19-24 and lines 27-30. Claims 16-20 are based on original claims 2-6. Claim 21 is based on original claims 6, 8, 10, and 13 as well as the text passages mentioned above. Claim 22 is based on original claim 14.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 15 calls for, inter alia:

providing at least one light sensitive sensor, the at least one light sensitive sensor being attached to the printing unit and being able to independently sense several partial ranges of light wavelengths;

Applic. No.: 10/635,737

Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

providing a light-emitting light source, light emitted from the light-emitting light source being reflected by or transmitted through a surface and/or a substrate stock on the surface in the printing unit;

sensing several partial ranges of light wavelengths of the reflected or transmitted light with the at least one light sensitive sensor and measuring the luminosity of these ranges of light wavelengths;

comparing the luminosity values of the sensed partial ranges of light wavelengths with reference values and recognizing a substrate stock on the surface if compared values differ at least for one range of light wavelengths.

Claim 21 calls for, inter alia:

at least one light sensitive sensor, said at least one light sensitive sensor being attached to the printing unit for independently sensing several partial ranges of light wavelengths;

a light-emitting light source, light emitted from said light-emitting light source being reflected by or transmitted through a surface and/or a substrate stock on said surface in the printing unit;

a device for comparing a luminosity value of at least one range out of several ranges of light wavelengths with a reference value and recognizing said substrate stock on said surface if compared values differ at least for one range of light wavelengths; and

a device for triggering an alarm and/or stopping at least an affected area of the printing unit if a substrate stock is recognized on said surface, said surface showing a color value deviating from all colors that the printing unit can produce with printing inks.

Hashimoto shows no sensors being able to sense several partial ranges of light wavelengths independently. Neither Hashimoto nor Sainio et al. disclose that luminosity values of the sensed partial ranges of light wavelengths are compared to

Applic. No.: 10/635,737

Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

reference values and a substrate stock is recognized if even one value differs from the corresponding reference value.

As mentioned in the "summary on the invention" of the instant application: "since the luminosity is measured in partial ranges independently from one another, changes of luminosity in two different partial wavelength ranges lead directly to even more certain recognition of a substrate stock" (see page 5, lines 27-30). Hashimoto does not show features that would enable such recognition. Sainio et al. might show a sensor that is able to sense different light wavelengths. However, Sainio et al. do not mention recognizing the substrate stock at all, but rather recognizing misregistration. In no case do Sainio et al. disclose such a method to recognize a substrate stock by comparing the luminosity values of independent, partial ranges of light wavelengths with reference values.

It is noted that the human eye shows no sensor attached to a printing unit.

Clearly, none of the references shows "comparing the luminosity values of the sensed partial ranges of light wavelengths with reference values and recognizing a substrate stock on the surface if compared values differ at least for one range of light wavelengths," as recited in claim 15 and "a

Applic. No.: 10/635,737

Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

device for comparing a luminosity value of at least one range out of several ranges of light wavelengths with a reference value and recognizing said substrate stock on said surface if compared values differ at least for one range of light wavelengths," as recited in claim 21 of the instant application.

Claims 15 and 21 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claims 15 or 21, they are believed to be patentable as well.

In view of the foregoing, consideration and allowance of claims 15-22 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of one-month pursuant to Section 1.136(a) in the amount of \$120.00 in accordance with Section 1.17 is enclosed herewith.

Applic. No.: 10/635,737

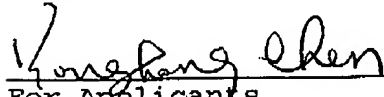
Amdt. Dated December 12, 2005

Reply to Office action of August 11, 2005

Please charge any fees which might be due with respect to 37
CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner
and Greenberg, P.A., No. 12-1099..

Respectfully submitted,

Yonghong Chen
Reg. No. 56,150


For Applicants

YC

December 12, 2005

Lerner and Greenberg, P.A.
Post Office Box 2480
Hollywood, FL 33022-2480
Tel: (954) 925-1100
Fax: (954) 925-1101